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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,902	12/03/2004	Apostolos Konstantinidis	3880-045705	2374

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Webb Ziesenheim Logsdon
Orkin & Hanson
700 Koppers Building
436 Seventh Avenue
Pittsburgh, PA 15219-1818

EXAMINER

YANG, RYAN R

ART UNIT	PAPER NUMBER
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2628

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/516,902	KONSTANTINIDIS, APOSTOLOS	
	Examiner	Art Unit	
	Ryan R. Yang	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/13/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to communications: Preliminary Amendment, filed on 12/03/2004. This action is non-final.
2. Claims 8-23 are pending in this application. Claims 8 and 22 are independent claims. In the Preliminary Amendment, filed on 12/03/2004, claims 1-7 were canceled, and claims 8-23 were added.

This application is a 371 of PCT/GR03/00021 filed 6/5/2002.

3. The present title of the invention is "Method and system for stereoscopic representation" as filed originally.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 8, 9, 11-13 and 17-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Scallie et al. (WO 02/36225 A1).

As per claim 8, Scallie et al., hereinafter Scallie, discloses a system for stereoscopic representation of a subject, comprising

a computer in communication with a graphic card having at least two outputs, wherein two images capturing the subject from two different positions are directed in the two outputs of the graphic card ("FIG. 6 shows an alternate configuration in which the R/L stereo image outputs are fed to a single dual-head graphics card, which is an ATI Radeon 8500 Dual Monitor card ... has 2 VGA monitor-capable outputs", page 13, line 21-23; "A virtual reality game system and method uses pseudo drivers to generate stereo vision outputs for a 3D stereoscopic display from game software normally intended for output to a 2D display of a conventional game console or PC", Abstract).

6. As per claim 9, Scallie demonstrated all the elements as disclosed in the rejected claim 8, and further discloses the two images are composed in a single image, which is electronically stored, decomposed to the two original images and directed in the two outputs of the graphic card (Figure 6, where R3D record visuals stores the image and ATI Radeon 8500 separates the original images).

7. As per claim 11, Scallie demonstrated all the elements as disclosed in the rejected claim 9, and further discloses software configured to perform at least one of composing, storing, decomposing and directing images in the computer ("A virtual reality game system and method uses pseudo drivers to generate stereo vision outputs for a 3D stereoscopic display from game software normally intended for output to a 2D display of a conventional game console or PC", Abstract).

8. As per claim 12, Scallie demonstrated all the elements as disclosed in the rejected claim 9, and further discloses each of the two images is generated from a video recording of the subject (Figure 6, where R3D record visuals stores the image).

9. As per claim 13, Scallie demonstrated all the elements as disclosed in the rejected claim 9, and further discloses each of the two images is technically generated (since the images are generated from the game engine, Figure 1B, item 10).

10. As per claims 17 and 18, Scallie demonstrated all the elements as disclosed in the rejected claims 10 and 11, supra, respectively, and further discloses each of the two images is technically generated (since the images are generated from the game engine, Figure 1B, item 10).

11. As per claim 19, Scallie demonstrated all the elements as disclosed in the rejected claim 8, and further discloses the system is at least one of an active stereoscopic system and a passive stereoscopic system (Figure 6 is a passive stereoscopic system).

12. As per claim 20, Scallie demonstrated all the elements as disclosed in the rejected claim 8, and further discloses the system stereoscopically represents sequenced image pairs ("pseudo API drivers 20 which generate right (R) and Left (L) stereoscopic image outputs to right and left stereoscopic display card 22, 23", page 6, line 19-20, where right and left stereoscopic images are inherently sequenced image pair).

13. As per claim 21, Scallie demonstrated all the elements as disclosed in the rejected claim 20, and further discloses the sequenced image pairs are at least one of

static, rate filled and real timed pairs (where the image pairs satisfies at least one of the conditions).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scallie et al.

As per claim 10, Scallie demonstrated all the elements as disclosed in the rejected claim 9.

As for the image resulting after the composition has double resolution compared to the size of the original two images, since it is notoriously well known in the art (Official Notice) that the displayed image could have twice the resolution of its original images, it would have been obvious to one of ordinary skill in the art to include the feature in order to obtain better image.

16. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scallie et al. as applied to claim 8 above, and further in view of Maki et al.

As per claim 14, Scallie demonstrated all the elements as disclosed in the rejected claim 9.

Scallie discloses a stereo display system. It is noted that Scallie does not explicitly disclose the image composed from the original two images is stored with additional information including at least one of position from which the images are captured, and the time when the capture occurred. However, this is known in the art as taught by Maki et al, hereinafter Maki. Maki discloses a stereoscopic display system in which "a three-dimensional position information extraction section which finds three-dimension position information by correlating the feature points contained in the image at a point in time with those at another point in time in the time-series images extracted by the feature point extraction section" (column 2, line 66- column 3, line 4 and Figure 1, item 2 is a storage section).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Maki into Scallie because Scallie discloses a stereo display system and Maki discloses a stereo display system in which position and time are captured and stored in order to display a moving object.

17. Claims 15, 16, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scallie et al. as applied to claim 8 above, and further in view of Lipton et al. (US 5,193,000).

18. As per claims 15 and 16, Scallie demonstrated all the elements as disclosed in the rejected claims 10 and 11, supra, respectively.

Scallie discloses a stereoscopic display system. It is noted that Scallie does not explicitly disclose each of the two images is generated from a video recording of the subject, however, this is known in the art as taught by Lipton et al, hereinafter Lipton.

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Lipton discloses a stereoscopic system in which the image is capture from the camera f1-f4 (Figure 1C).

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Lipton into Scallie because Scallie discloses a stereoscopic display system and Lipton further discloses the image could be captured with multiple cameras in order to create the stereoscopic effect.

19. As per claim 22, Scallie discloses a method of stereoscopically representing a subject, comprising the steps of:

directing the two images to two outputs of a graphic card of a computer ("FIG. 6 shows an alternate configuration in which the R/L stereo image outputs are fed to a single dual-head graphics card, which is an ATI Radeon 8500 Dual Monitor card ... has 2 VGA monitor-capable outputs", page 13, line 21-23; "A virtual reality game system and method uses pseudo drivers to generate stereo vision outputs for a 3D stereoscopic display from game software normally intended for output to a 2D display of a conventional game console or PC", Abstract).

Scallie discloses a method of stereoscopically representing a subject. It is noted that Scallie does not explicitly disclose capturing two images of the subject from two different positions, however, this is noted in the art as taught by Lipton. Lipton discloses a stereoscopic image display method in which the two image are captured from two positions.

Thus, it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Lipton into Scallie because Scallie discloses a stereoscope image

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display method and Lipton discloses the image could be captured from two camera at different positions in order generate a realistic stereo image.

20. As per claim 23, Scallie and Lipton demonstrated all the elements as disclosed in the rejected claim 22, and Scallie further composing the two images in a single image;

electronically storing the composed image (Figure 6, where R3D record visuals stores the composed image);

decomposing to the two original images (Figure 6, where ATI Radeon 8500 Dual Monitor decompose the two images); and

directing the decomposed images to the two outputs of the graphic card (where the output of ATI Radeon 8500 has two outputs).

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Inquiries

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan R Yang whose telephone number is (571) 272-7666. The examiner can normally be reached on M-F 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (571) 272-7664. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ryan Yang
Primary Examiner
July 17, 2007